



**BAY COUNTY UTILITY SERVICES**  
3400 Transmitter Road  
Panama City, FL 32404

# 2019 ANNUAL WATER QUALITY REPORT BAY COUNTY



## WHAT IS THIS REPORT ?

The Environmental Protection Agency requires public water suppliers that serve the same people year-round (community water systems) to provide consumer confidence reports to their customers. These reports are also known as annual water quality reports. This report summarizes information regarding water sources used, any detected contaminants, compliance and educational information. Our water source is surface water drawn from Deer Point Reservoir.



In 2018, the Department of Environmental Protection performed a Source Water Assessment on our system. The assessment was conducted to provide information about any potential sources of contamination in the vicinity of our surface water intakes. The surface water system is considered to be at high risk because of the many potential sources of contamination present in the assessment area. The assessment results are available on the FDEP Source Water Assessment and Protection Program website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp) or they can be obtained from Bay County Utility Services by calling (850) 248-5010.

The Bay County Water Treatment Plant uses a conventional treatment process consisting of coagulation, flocculation, sedimentation, filtration, pH adjustment, disinfection, fluoridation, and corrosion control. The treatment process includes adding lime occasionally to provide additional alkalinity to the raw water so that it can react with the primary coagulating chemical, ferric sulfate, which is added to remove particles and organics. Polymer is also added to assist in the coagulation process. Sodium Hypochlorite is added to maintain disinfection in the distribution system. The addition of zinc orthophosphate reduces the corrosiveness of the water. Fluoride, in the form of Hydrofluorosilicic acid, is added as a supplement to prevent tooth decay. Lime is also added at the end of the process to increase the pH. These processes are needed to meet the drinking water standards as set by the United States Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP).

Bay County Water Treatment Plant routinely monitors for contaminants in your drinking water according to Federal and State laws, rules, and regulations. Except where indicated otherwise, this report is based on the results of our monitoring for the period of January 1 to December 31, 2019. Data obtained before January 1, 2019, and presented in this report, are from the most recent testing done in accordance with the laws, rules, and regulations.

If you have any questions about this report or concerns about your water utility, please contact Bobby Gibbs Water Division Superintendent at (850) 248-5010. We encourage our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly schedule Bay County Commission meetings. The meetings are scheduled the first and third Tuesday of each month. Public notices of the meetings are announced regularly publicizing the date, time, and location of the meeting.

Our staff works around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

Bay County's Water System is in violation of the Cross Connection Control Requirement as specified in the State CCR Rules, F.A.C. Rule 62-555.360 & 330. The system failed to adopt and/or implement a written cross connection control and backflow prevention program as required. The 2019 FDEP Sanitary Survey performed on our system recommended the following action; Present a drafted and revised Cross-Connection Control Program (CCCP) plan, which meets the 2014 rule, to the County Commission for adoption and implementation.

**What are we doing to meet this requirement?** Our goal is to adopt and implement a new Cross-Connection Control Program (CCCP) plan, which meets the 2014 rule, within the next 12-months. After adoption, all future Bay County water customers with dedicated irrigation service connections will need to install the required pressure vacuum breaker (PVB) or reduced pressure (RP) backflow device. Please note that all service connections currently have a dual check backflow device that is approved for standard residential connections, however the device does not meet minimum protection for dedicated irrigation meters as outlined in the 2014 rule. To help customers understand the plan better, Bay County Utilities will have a Q&A sheet available, along with definitions to unfamiliar terms and abbreviations found in the new plan on our website. Handouts of the material will also be available at Bay County Utilities Service Office located at 3400 Transmitter Rd.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) *Inorganic contaminants*, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) *Pesticides and herbicides*, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) *Organic chemical contaminants*, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- (E) *Radioactive contaminants*, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations, which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

**Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).**



In the table below, you may find unfamiliar terms and abbreviations. To help you better understand these terms we've provided the following definitions:

Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Maximum residual disinfectant level or MRDL: The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum residual disinfectant level goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Nephelometric Turbidity Unit (NTU) - measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

“ND” means not detected and indicates that the substance was not found by laboratory analysis.

Parts per billion (ppb) or Micrograms per liter (µg/l) – one part by weight of analyte to 1 billion parts by weight of the water sample.

Parts per million (ppm) or Milligrams per liter (mg/l) – one part by weight of analyte to 1 million parts by weight of the water sample.

Picocurie per liter (pCi/L) - measure of the radioactivity in water.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

2019 CONTAMINANTS TABLE

| Microbiological Contaminants        |                             |                       |                                |  |      |     |                                |
|-------------------------------------|-----------------------------|-----------------------|--------------------------------|--|------|-----|--------------------------------|
| Contaminant and Unit of Measurement | Dates of sampling (mo./yr.) | MCL /TT Violation Y/N | The Highest Single Measurement | The Lowest Monthly Percentage of Samples Meeting Regulatory Limits | MCLG | MCL | Likely Source of Contamination |
| Turbidity (NTU)                     | Jan 19- Dec 19              | N                     | 0.47                           | 98.9   | N/A  | TT  | Soil runoff                    |

Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. High turbidity can hinder the effectiveness of disinfectants. The Treatment Technique standard requires that 95% of the turbidity readings be at 0.3 NTU or less.

Radioactive Contaminants

| Contaminant and Unit of Measurement         | Dates of sampling (mo. /yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG | MCL | Likely Source of Contamination |
|---|------------------------------|-------------------|----------------|------------------|------|-----|--------------------------------|
| Radium 226 + 228 or combined radium (pCi/L) | Apr-17                       | N                 | 1.5            | N/A              | 0    | 5   | Erosion of natural deposits    |

Inorganic Contaminants

| Contaminant and Unit of Measurement | Dates of sampling (mo. /yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG | MCL | Likely Source of Contamination   |
|-------------------------------------|------------------------------|-------------------|----------------|------------------|------|-----|--|
| Barium (ppm)                        | April –19                    | N                 | 0.0062         | N/A              | 2    | 2   | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits   |
| Fluoride (ppm)                      | April –19                    | N                 | 0.67           | 0.67-0.67        | 4    | 4.0 | Erosion of natural deposits; discharge from fertilizer and aluminum factories. Water additive which promotes strong teeth when at the optimum level of 0.7 ppm |
| Nickel (ppb)                        | April -19                    | N                 | 2.3            | N/A              | N/A  | 100 | Pollution from mining and refining operations. Natural occurrence in soil.   |
| Nitrate (ppm)                       | April –19                    | N                 | 0.13           | N/A              | 10   | 10  | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural Deposits  |
| Sodium (ppm)                        | April –19                    | N                 | 3.8            | N/A              | N/A  | 160 | Salt water intrusion, leaching from soil   |

Stage 1 Disinfectants and Disinfection By-Products

| Disinfectant and Unit of Measurement | Dates of sampling (mo. /yr.) | MRDL Violation Y/N | Level Detected   | Range of Results                | MRDLG    | MCL or MRDL | Likely Source of Contamination          |
|--------------------------------------|------------------------------|--------------------|--|---------------------------------|----------|-------------|---|
| Chlorine (ppm)                       | Jan 19- Dec 19               | N                  | 1.05   | 0.7 - 1.2                       | MRDLG =4 | MRDL =4     | Water additive used to control microbes |
| Contaminant and Unit of Measurement  | Dates of sampling (mo/yr.)   | TT Violation Y/N   | Lowest Running Annual Average, Computed Quarterly, of Monthly Removal Ratios | Range of Monthly Removal Ratios | MCLG     | MCL         | Likely Source of Contamination          |
| Total Organic Carbon                 | Jan 19- Dec 19               | N                  | 1.6  | 1.3 – 2.4                       | N/A      | TT          | Naturally present in the environment    |

Stage 2 Disinfectants and Disinfection By-Products

| Contaminant and Unit of Measurement  | Dates of sampling (mo. /yr.) | MCL Violation Y/N | Level Detected | Range of Results | MCLG | MCL      | Likely Source of Contamination            |
|--------------------------------------|------------------------------|-------------------|----------------|------------------|------|----------|---|
| Haloacetic Acids (five) (HAA5) (ppb) | Jan 19 - Dec 19              | N                 | 33..8          | 3.5– 45.8        | N/A  | MCL = 60 | By-product of drinking water disinfection |
| TTHM [Total trihalomethanes] (ppb)   | Jan 19 - Dec 19              | N                 | 44.03          | 6.7– 90.6        | N/A  | MCL = 80 | By-product of drinking water disinfection |

**No MCL violation on TTHM.** Compliance is determined by average of four consecutive quarters “One sample during 2019 (Mexico Beach Meter, July) had a TTHM result of 90.6 ppb, which exceeds the MCL of 80 ppb. However, the system did not incur an MCL violation because all annual average results at all sites were below the MCL of 80 ppb.

Lead and Copper (Tap Water)

| Contaminant and Unit of Measurement | Dates of Sampling (mo./yr.) | AL Violation Y/N | 90th Percentile Result | No. of sampling sites exceeding the AL | MCLG | AL Action Level | Likely Source of Contamination   |
|-------------------------------------|-----------------------------|------------------|------------------------|--|------|-----------------|--|
| Copper (tap water) (ppm)            | Aug 17                      | N                | 0.37                   | 0 of 30                                | 1.3  | 1.3             | Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |
| Lead (tap water) (ppb)              | Aug 17                      | N                | 0.7                    | 0 of 30                                | 0    | 15              | Corrosion of household plumbing systems; erosion of natural deposits                                   |

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Bay County Utility Services is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at

Unregulated Contaminants

| Contaminant and Unit of Measurement | Dates of Sampling (mo/yr.) | Level Detected (Average) | Range      | Likely Source of Contamination |
|-------------------------------------|----------------------------|--------------------------|------------|--------------------------------|
| Manganese (ppb)                     | March 2019                 | 1.5                      | N/A        | Unavailable                    |
| Bromide (ppb)                       | March 2019                 | 14.8                     | N/A        | Unavailable                    |
| TOC (ppb)                           | March 2019                 | 2750                     | N/A        | Unavailable                    |
| HAA5 (ppb)                          | March 2019                 | 10.32                    | 5.09-19.13 | Unavailable                    |
| HAA6 Br (ppb)                       | March 2019                 | 4.23                     | 2.88-5.375 | Unavailable                    |
| HAA9 (ppb)                          | March 2019                 | 14.44                    | 7.97-24.5  | Unavailable                    |

Bay County completed the monitoring for unregulated contaminants (UCs) in 2019 as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) or likely sources have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. All detections are shown on the table, but if you would like a copy of all our 2019 UC data If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.